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REMARKS

Claim 9 has been cancelled. New Claims 80-94 have been added. Support for the new Claims 80 and 81 can be found in paragraph [0215] of the Specification as filed. Support for the new Claim 82 can be found in paragraph [0141] of the Specification as filed. Support for the new Claim 83 can be found in paragraph [0069] of the Specification as filed. Support for the new Claim 84 can be found in paragraph [0061] of the Specification as filed. Support for the new Claim 85 can be found in paragraph [0085] of the Specification as filed. Support for the new Claim 86 can be found in paragraph [0086] of the Specification as filed. Support for the new Claim 87 can be found in paragraphs [0077]-[0079] of the Specification as filed. Support for the new Claim 88 can be found in paragraph [0053] of the Specification as filed. Support for the new Claim 89 can be found in paragraphs [0090], [0432] and Example 16 of the Specification as filed. Support for the new Claim 90 can be found in paragraph [0097] of the Specification as filed. Support for the new Claim 91 can be found in paragraph [0098] and Table 2 of the Specification as filed. Support for the new Claim 92 can be found in paragraph [0099] and Table 3 of the Specification as filed. Support for the new Claim 93 can be found in paragraph [0099] of the Specification as filed. Support for the new Claim 94 can be found in paragraph [0106] of the Specification as filed. Claims 1-4, 7, 8, 10, 12-19, 24, 26-40, 43, 46, 47, 50-55, and 59-61 have been amended. Support for the amendments to Claim 1 can be found in paragraphs [0044]-[0047], [0131] of the Specification as filed, and in the Claim 9 as originally filed. Any amendments not specifically mentioned herein are introduced to merely clarify the Claims language in accordance with the US PTO rules. No new matter has been introduced herewith.

Claim rejections under 35 U.S.C. §112

The Examiner has rejected Claims 1-61 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regard as invention. More specifically, Claims 1-61 were rejected for recitation "components thereof" and "components"; Claim 4 was rejected for reciting "original components"; Claims 10-11 were rejected for reciting "first category" and "second category" for lack of antecedent basis; and Claims 46, 47 and 55 were rejected for reciting "the microorganism" for lack of antecedent basis. The Applicants have amended Claim 4 to now recite: "components". The Applicants respectfully disagree with the term "components" being

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considered unclear, as paragraph [0175] specifically describes components of organisms such as receptors, antibodies, enzymes, etc. Claims 8, 10 and 11 have been amended to provide the antecedent basis for "first category" and "second category". Claims 46, 47 and 55 have been amended to depend on Claim 6, which recites "microorganism" thereby providing the necessary antecedent basis for "the microorganism" of Claim 46, 47 and 55.

Claim rejections under 35 U.S.C. §102(b)

The Examiner has rejected claims 1-7, 9-34, 39-45 and 55-61 under 35 U.S.C. §102(b) as being allegedly anticipated by Brown *et al.* (US 5,807,522). Applicant respectfully asserts that Brown *et al.* does not anticipate the subject matter encompassed by currently amended Claims 1-7, 10-34, 39-45 and 55-61. To be anticipatory under 35 U.S.C. § 102, a reference must teach each and every element of the claimed invention. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). "Invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art reference. ...There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Brown *et al.* does not teach all the limitations of the present claims. For example, Brown *et al.* does not teach nor suggest amplifying at least two of homologous nucleotide sequences in a sample using the same primer pair, nor does Brown *et al.* teach discrimination of homologous sequences on an array. Thus, because Brown *et al.* fails to teach or suggest a single-stranded capture nucleotide sequences bound in an array to an insoluble solid support to identify homologous nucleotide sequences that are amplified using the same primer pair, Applicants respectfully assert that Brown does not anticipate any of Claims 1-7, 9-34, 39-45 and 55-61. Accordingly, Applicants request withdrawal of the §102(b) rejections.

Claim rejections under 35 U.S. §102(e)

The Examiner has rejected Claims 1-34, 37, 39-45 and 55-61 under 35 U.S.C. §102(e) as being allegedly anticipated by Gingeras *et al.* (US 6,228,575). Applicant respectfully asserts that Gingeras *et al.* does not anticipate the subject matter encompassed by Claims 1-34, 37, 39-45 and 55-61. To be anticipatory under 35 U.S.C. § 102, a reference must teach each and every element of the claimed invention. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). "Invalidity for anticipation requires that all of the elements and

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limitations of the claim are found within a single prior art reference. ...There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Gingeras *et al.* does not teach all the limitations of the present claims. For example, Gingeras *et al.* does not teach amplifying target sequences using same primer pair for at least two of said target sequences. Therefore, Applicants respectfully assert that Gingeras *et al.* does not anticipate any of Claims 1-34, 37, 39-45 and 55-61. Accordingly, Applicants request withdrawal of the §102(e) rejections.

Claim rejections under 35 U.S.C. §103(a)

The Examiner has rejected Claims 8, 35-38 and 46-54 under 35 U.S.C. §103(a) as being allegedly unpatentable over Brown *et al.* (US 5,807,522) as applied to Claims 1-7, 9-34, 39-45 and 55-61 above, and further in view of Vannuffel *et al.* (WO 99/16780) on the assertion that it would have been obvious at the time the invention was made to modify the method of Brown by including the consensus sequences specific for the *femA* sequence of Staphylococcal species to provide effective means of detecting specific species of the Staphylococci genus for use in diagnosing staphylococcal infections. The Applicants would like to respectfully point out that Claims 8, 35-38 and 46-54 do not recite "*femA* sequence" limitation, and therefore the rejection does not apply to these claims. Furthermore, even though the new Claim 86 now does recite "*femA* gene", the above-referenced 103(a) rejection over Brown *et al.* in view of Vannuffel *et al.* does not apply.

As discussed above, Brown *et al.* does not disclose nor suggest amplifying at least two of homologous nucleotide sequences in a sample using the same primer pair, nor does Brown *et al.* teach discrimination of homologous sequences on an array.

Vannuffel describes a reverse hybridization assay of PCR amplified *FemA* gene fragments using *Staphylococcus*-specific probes immobilized on nylon membranes. The FemA amplicons were hybridized to the immobilized probes and then revealed using a streptavidin-peroxidase conjugate and the DAB substrate. The Vannuffel *et al.* reference fails to cure the described deficiency of the primary reference of Brown *et al.* Therefore, the Applicants respectfully assert that amended Claims 1-7, 9-34, 39-45 and 55-61, and the new Claim 86 are non-obvious over Brown *et al.* in view of Vannuffel *et al.* and respectfully request withdrawal of this 103(a) rejection of Claims.

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The Examiner has rejected Claims 35, 36, 38, 46, and 48-54 under 35 U.S.C. §103(a) as being allegedly unpatentable over Gingeras *et al.* (US 6,228,575) as applied to Claims 1-34, 37, 39-45, 47, and 55-61 above, and further in view of Vannuffel *et al.* (WO 99/16780) on the assertion that it would have been obvious at the time the invention was made to modify the method of Gingeras *et al.* by including the consensus sequences specific for the *femA* sequence of Staphylococcal species to provide effective means of detecting specific species of the Staphylococci genus for use in diagnosing staphylococcal infections. The Applicant respectfully disagrees. The Applicants would like to respectfully point out that Claims 35, 36, 38, 48, and 48-54 do not recite "*femA* sequence", and therefore the rejection does not apply to these claims. Furthermore, even though the new Claim 86 now does recite "*femA* gene", the above-referenced 103(a) rejection over Gingeras *et al.* in view of Vannuffel *et al.* does not apply.

As discussed above, Gingeras *et al.* does not teach amplifying target sequences using same primer pair for at least two of said target sequences. Vannuffel describes reverse hybridization assay of PCR amplified *FemA* gene fragments using *Staphylococcus*-specific probes immobilized on nylon membranes. The *FemA* amplicons were hybridized to the immobilized probes and then revealed using a streptavidin-peroxidase conjugate and the DAB substrate. Vannuffel *et al.* does not describe nor suggest using the same primer pair to amplify at least two of the target sequences. Therefore, because the Vannuffel *et al.* reference fails to cure the described deficiency of the primary reference of the Gingeras *et al.* reference, the Applicants respectfully assert that Claims 35, 36, 38, 46, and 48-54, and new Claim 86 are not obvious over Gingeras *et al.* in view of Vannuffel *et al.* Withdrawal of this 103(a) rejection is specifically requested.

CONCLUSION

In view of the foregoing, Applicants respectfully submit the present application is fully in condition for allowance. If any issues remain that may be addressed by a phone conversation, the Examiner is invited to contact the undersigned at the phone number listed below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: Aug 15, 2002

By: [Signature]

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